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Guidelines for Metric Conversion of Planning Documents

September, 1977

Local Planning Policy Branch
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PREFACE

The Ministry of Housing is directly addressing the program of metric conversion through the issuance of these guidelines for the use of metric measurements in planning documents.

There are other actions toward conversion in the community development and housing construction segments of this ministry. Subdivisions, under land development programs are being drafted in metric terms. This fall most tendering will also be in metric so that construction of services such as water and sewer lines can proceed accordingly by April 1978. Purchasing within the ministry is changing to metric systems as quickly as possible.

It is the intention of the Ministry of Housing to be in harmony with metric conversion programs across Canada.

Although it is possible to use metric terms of measurement in planning documents now, these guidelines should aid municipalities in their conversion programs by outlining conversion practices for existing documents. They also provide dates to establish an across-the-province system of uniformity.

The rules established are sufficiently simple that municipalities should be able to convert documents without resorting to outside help. Anyone with a working knowledge of the decimal system and practice in simple mathematical computations should find the process easy to follow.

These guidelines were written by staff in the Special Studies Section of the Local Planning Policy Branch. Further inquiries regarding the use of the guidelines, however, should be directed to the nearest field office of the Community Planning Advisory Branch.

TABLE OF CONTENTS

	<u>Page</u>
<u>PREFACE</u>	i
A. <u>INTRODUCTION</u>	1
B. <u>CONVERSION PRINCIPLES</u>	1
C. <u>BACKGROUND</u>	2
D. <u>THE APPROACH TO CONVERSION</u>	4
D.1 <u>RECOMMENDED UNITS</u>	4
D.2 <u>CONVERSION FACTORS</u>	4
D.3 <u>PRECISION AND SIGNIFICANT DIGITS OR FIGURES</u>	5
D.4 <u>ROUNDING OF NUMBERS</u>	6
D.5 <u>DUAL DIMENSIONS</u>	7
E. <u>PROVINCIAL LEGISLATION</u>	8
E.1 <u>THE PLANNING ACT</u>	8
E.2 <u>AMENDMENTS TO THE PLANNING ACT -</u> <u>SECTIONS 33 (2)(b) & 35 (b)(3)</u>	8
F. <u>MUNICIPAL PLANNING DOCUMENTS</u>	8
F.1 <u>EXISTING MUNICIPAL PLANNING DOCUMENTS</u>	9
F.1.1 <u>Restricted Area (Zoning) By-Laws</u>	10
F.1.1a <u>Amendments to The Planning Act and</u> <u>Existing Zoning By-laws</u>	10
F.1.1b <u>Eliminating Ontario Municipal Board</u> <u>Approval</u>	11
F.1.1c <u>Steps to Follow in Converting Existing</u> <u>Zoning By-laws</u>	11
F.1.1d <u>Accuracy in the Conversion of Existing</u> <u>By-laws</u>	12
F.1.2 <u>Official Plans</u>	12
F.1.3 <u>Other Existing Municipal Planning</u> <u>Documents</u>	13
F.2 <u>NEW MUNICIPAL PLANNING DOCUMENTS</u>	13
F.2.1 <u>Plans of Subdivision</u>	14
F.2.2 <u>Other Land Transactions</u>	14
F.2.3 <u>By-laws</u>	14
F.2.4 <u>Official Plans</u>	14
F.2.5 <u>Other Planning Documents</u>	14
G. <u>ASSISTANCE IN CONVERTING PLANNING DOCUMENTS</u>	15

SELECTED BIBLIOGRAPHY 16

APPENDIX I

EXAMPLES OF THE CONVERSION OF EXISTING ZONING
BY-LAWS 17

METRIC MEASUREMENTS TO REPLACE SOME COMMONLY
USED NON-METRIC MEASUREMENTS IN EXISTING
RESTRICTED AREA (ZONING) BY-LAWS 19

APPENDIX II

EXAMPLES OF THE USE OF METRIC MEASUREMENTS IN NEW
PLANNING DOCUMENTS 20

A. INTRODUCTION

Because of the interest in the use of metric terms in planning documents by municipalities in Ontario these guidelines are now being issued. They facilitate the use of metric systems of measurement in new documents and provide a working basis for the conversion of existing ones.

These guidelines are only concerned with planning documents prepared under *The Planning Act* of Ontario.

The Province of Ontario will amend *The Planning Act* and its regulations in the Fall of 1977 to expedite the conversion of documents already in existence and to govern approval of new documents. However, municipal officials can begin preparations for conversion now, although no formal action with existing documents should be taken until *The Planning Act* has been amended.

All municipalities will be sent copies of the amendments to *The Planning Act* and regulations after they have come into effect.

B. CONVERSION PRINCIPLES

The Ministry of Housing has adopted a position toward metric conversion in which equity and administrative simplicity are the overriding factors.

The changes that will take place in planning documents produced at the local level will therefore be representative of these provincial concerns for both new and existing documents.

The approach to conversion will be the same in those instances where authority has been delegated.

Through amendments to *The Planning Act*, regulations and policy statements, the use of metric terms in planning

documents will be facilitated. Details are given later in this publication but the main issues addressed are the following:

- Two non-metric measurements in *The Act* will be amended;
- Official plans will be amended without circulation by the province to various agencies so that approval will be given quickly;
- Specific provisions will be made in *The Planning Act* for the special problems associated with zoning by-laws -- uses will not be created by the process of conversion that do not comply with the by-law, nor will approval of the Ontario Municipal Board be required;
- Dates for the use of metric terms in new and existing local planning documents will be given;
- A method of converting units of measure to provide a range of accuracy from complete accuracy to 0.5 units of measurement will be established.

The last point is an example of providing a method that will not overburden the conversion system with cumbersome mathematical computations. After considerable discussion and consultation, it was concluded that only under very special circumstances would measurements used in most planning documents require a greater degree of accuracy than to the nearest half unit, e.g. metre, square metre or hectare.

It is intended in addition to amending *The Planning Act* and its regulations, to convert all Ministers Orders, policy statements and guidelines.

C. BACKGROUND

In 1970 Canada adopted a policy of metric measurements. In September 1976, Metric Commission Canada approved a

plan which called for all legislation relating to planning to be in metric terminology by mid-1977. This would enable construction to proceed in predominantly metric units by January 1978.

The federal policy has been endorsed by all provincial governments. The policy of the Ontario government is for each Ministry to be responsible for its own conversion program and the people with whom it normally deals. This enables each public inquiry to receive a direct response from the Ministry most familiar with the subject matter.

Furthermore, target dates established at the federal level will be adopted by provincial ministries whenever feasible.

These guidelines are concerned with the implications of metric conversion for those concerned with applying the provisions of *The Planning Act*. Local municipal officials in particular will be affected by policies concerning the use of metric units.

Prime objectives during the conversion period are the avoidance of conflicts between documents, keeping administration as simple as possible and preventing hardships upon the users of land.

In accordance with these objectives, revisions to *The Planning Act* will be introduced in the Fall of 1977. In summary, non-metric terms in *The Act* will be changed to metric ones; new municipal planning documents will contain metric terms; and provision will be made for changing existing local planning documents. The introduction of metric terms is a normal "technological" change and is not expected to cause any significant problems.

So that metric measurements are used in a consistent manner across the province, procedures and target dates for the use of metric terms in local planning documents will be established.

D. THE APPROACH TO CONVERSION

The period of time during which metric units are introduced to replace the old units should be as short as possible.

Experience has shown that the faster the old units are abandoned the quicker the new units are learned; a "feeling" develops for the new units and they are accepted as normal.

These guidelines only relate to linear and area measurements. They are not necessarily applicable to standards of performance. Reference should be made to handbooks listed in the bibliography for the conversion of other measurements.

The guidelines are applicable to planning documents such as official plans and zoning by-laws. They are not intended to be applied to existing registered land documents such as plans of subdivision. Property standards by-laws should follow conversion guidelines established for the Ontario Building Code, as they become available. This may also be advisable for particular aspects of some other documents.

D.1 RECOMMENDED UNITS

It is recommended that the metre (m) be used as the unit of length. Multiples and submultiples are to be obtained by moving the decimal, e.g. 0.01 m, 0.1 m, 1 m, 10 m, 100 m. The kilometre (km) is the recommended measurement for distances now specified in miles.

The recommended unit of area is the square metre (m^2), but the hectare may be used ($1 \text{ ha} = 10\,000 \text{ m}^2$).

D.2 CONVERSION FACTORS

Conversion factors have been established under federal

legislation.*

	<u>To Convert</u>	<u>Multiply By</u>	<u>To Find</u>
length	inches	0.025 4	metres (m)
	feet	0.304 8	metres (m)
	yards	0.914 4	metres (m)
	miles	1 609.344	metres (m)
		1.609 344	kilometres (km)
area	sq. feet	0.092 903 04	sq. metres (m ²)
	sq. yards	0.836 127 4	sq. metres (m ²)
	acres	4 046.856	sq. metres (m ²)
	acres	0.404 685 6	hectares (ha)
	sq. miles	2.589 988	sq. kilometres (km ²)

D.3 PRECISION AND SIGNIFICANT DIGITS OR FIGURES

The precision or exactitude of measurements in a planning document varies with the nature of the document.

Measurements in an official plan are not meant to be precise because the document is concerned with general policy. On the other hand, documents which describe specific parcels of land such as consents or plans of subdivision must be very accurate. Measurements in restricted area (zoning) by-laws which describe standards applicable to different parcels of land are interpreted as being very accurate when applied to existing situations because of the implications of non-compliance. However, the standards themselves are initially established with some flexibility and, thus, their conversion can be treated in the same way.

Regardless of the ultimate precision of any measurement, the same method should be applied in conversion, and the method involves the use of significant digits or figures.

Significant figures are not synonymous with the number of figures to the left or right of a decimal place but with the number of figures which give meaning to the answer.

Any of the digits from 1 to 9 is a significant digit even

* *Weights and Measures Act, Canada.*

though their use may vary in magnitude. For example, 124, 12.4 and 0.012 4 all have 3 significant digits or figures.

Zeros may or may not be significant. In the conversion factor 0.914 4 the zero is not significant. However, in the conversion of many linear measurements a number of zeros after the last figure and to the right of the decimal place would be interpreted as significant since an exact number is implied. An example would be 40 feet expressed as 40.0 or even 40.000 feet. This would be the case in restricted area (zoning) by-laws, where the measurements reflect precision.

The number of significant figures in the product obtained by multiplying two factors should not be more precise than the original values imply. In other words, the answer should be rounded so that it does not contain more significant figures than contained in either of the factors being multiplied or divided.

D.4 ROUNDING OF NUMBERS

Within planning documents, which have had non-metric terms converted to metric measurements the measurement will be expressed to only a few significant figures. The provisions which will form part of the amended *Planning Act* will permit metric units to be rounded to the nearest 0.5 of measurement.

General principles in rounding numbers are:

- a. Convert terms first.
- b. When the first digit discarded is less than five, the last digit retained should not be changed.

Example:

3.141 326 rounded to 4 digits 3.141

- c. When the first digit discarded is greater than five, or if it is a five followed by at least

one digit other than zero, the last figure retained should be increased by one unit.

Examples:

2.213 72 rounded to 4 digits 2.214

4.168 501 rounded to 4 digits 4.169

- d. When the first digit discarded is exactly five, followed only by zeros, the last digit retained should be increased by one if it is odd, but no change made if it is even.

Examples:

2.35 rounded to 2 digits 2.4

-6.35 rounded to 2 digits -6.4

2.45 rounded to 2 digits 2.4*

- e. When rounding to the nearest 0.5 unit of measurement, round first to a tenth of a digit and then increase or decrease to the nearest 0.5 unit:

decrease 0.1 and 0.2 to the nearest whole number,
increase 0.3 and 0.4 to the nearest 0.5 number,
decrease 0.6 and 0.7 to the nearest 0.5 number,
increase 0.8 and 0.9 to the nearest whole number.

Examples:

2.1 m rounded to 2.0 m

23.2 m 23.0 m

7.3 m 7.5 m

14.4 m 14.5 m

9.5 m remains 9.5 m

3.6 m² rounded to 3.5 m²

51.7 m 51.5 m

6.8 m 7.0 m

1.9 ha 2.0 ha

60.0 ha remains 60.0 ha

D.5 DUAL DIMENSIONS

Dual dimensions on drawings or in by-laws, official plans, etc., such as in both metres and feet, *are not recommended*. The existence of two dimensions necessitates careful

* Canadian Standards Association. *Canadian Metric Practice Guide*. CAN3-Z234.1-76. p. 29, 30.

administration in order to avoid errors. In addition dual labelling is considered a disincentive to learning. If in special circumstances it is found necessary to show both dimensions it is recommended that the old units be shown in brackets after the metric units, e.g. 2 metres (2.187 yards).

E. PROVINCIAL LEGISLATION

E.1 *THE PLANNING ACT*

The present wording of *The Planning Act* does permit the use of metric measurement in any document prepared under provisions of *The Act*.

The Planning Act itself contains only two direct references to measurement.

E.2 AMENDMENTS TO *THE PLANNING ACT* -
SECTIONS 33 (2) (b) & 35 (b) (3)

The first reference is found in Section 33 (2) (b) dealing with the subdivision of land. This section requires a key plan "on a scale of not less than one inch to 1,000 feet". The section will be amended to provide for a key plan on a scale of not less than one centimetre to 100 metres.

The second reference is in Section 35 (b) (3) which permits, under special circumstances, land to be conveyed to the municipality for park purposes. The rate is one acre for each 120 dwelling units or at such lesser rate as may be specified. The section will be amended to metric terms to specify a rate of 1 hectare for each 300 dwelling units or at such lesser rate as may be specified.

F. MUNICIPAL PLANNING DOCUMENTS

Local municipal officials are aware of the documents prepared under *The Planning Act* at the local level. They include official plans, zoning and property standards

by-laws, plans of subdivision, the granting of consents and variances, and dedications of land.

Provincial legislation other than *The Planning Act* is also of consequence. As of 1 July 1976 documents registered under the following Acts can be registered in metric terms:

The Land Titles Act
The Registry Act
The Condominium Act and
The Certification of Titles Act.*

As a result of the changes in these Acts plans of subdivision and consents can now be registered in metric measurement, for example.

There are two areas of concern in the metric program:

1. Amendment or conversion of existing municipal legislation.
2. New municipal legislation.

The following discussions are approaches to metric conversion which municipal officials should follow.

F.1 EXISTING MUNICIPAL PLANNING DOCUMENTS

The usefulness and ease of converting existing municipal planning documents varies with the type of document. For example, it is desirable to have metric terms in official plans because they are frequently and widely used as references.

On the other hand, there is little advantage in converting existing documents which describe the dimensions of actual

* O. Reg. 448/76 *The Land Titles Act*
449/76 *The Certification of Titles Act*
450/76 *The Registry Act*
451/76 *The Condominium Act*.

parcels of land unless the boundaries of those lands are altered.

Some documents, notably restricted area or zoning by-laws may contain many terms within many documents or amendments which may take time to identify and convert.

F.1.1.1 Restricted Area (Zoning) By-laws

In some situations, such as with infrequently used by-laws, or by-laws with few measurement clauses, it may be more convenient not to convert old units. An example would be a zoning by-law applying to only one plan of subdivision.

However, if a reprinting or consolidation of the by-law is undertaken, serious consideration should be given to converting the units.

A by-law in frequent use should definitely be amended.

Because of the complexity of using by-laws having dimensions from two systems of measurement, all municipalities should strive to complete their conversion by the end of 1979.

To keep within the objectives of administrative simplicity and equity for landowners, there are special problems associated with the conversion of existing zoning by-laws not associated with those of other planning documents that need to be considered.

Zoning by-laws generally contain many standards which are specific in their numerical value. Conversion of these standards could create situations where existing buildings and structures erected under the previous by-law no longer comply with the new by-law.

F.1.1.1a Amendments to *The Planning Act* and Existing Zoning By-laws
Accordingly, a special clause will be added to *The Planning Act* to prevent the creation of uses that do not comply with

the by-law as amended. The clause will state that any use that complied with the provisions of the parent by-law will automatically be deemed to comply with the provisions of the amending by-law, provided that the sole purpose of the amending by-law is to convert measurements to metric units.

F.1.1b Eliminating Ontario Municipal Board Approval

Presently, any amendment to a zoning by-law must be submitted to the Ontario Municipal Board for approval. To submit each by-law, which is only amended for direct conversion of measurement terms, would be impossibly burdensome for both the municipality and the Ontario Municipal Board. Therefore, *The Planning Act* will be amended to make provision for amending existing zoning by-laws in which the only changes are the conversion to metric measurements, without the necessity of requiring approval by the Municipal Board.

F.1.1c Steps to Follow in Converting Existing Zoning By-laws

Regulations to be issued under *The Planning Act* will simplify the administrative process of converting a zoning by-law to metric measurement through the following steps:

- a. Apply the proper conversion factors to the conversion of measurements used in planning documents.
- b. Convert any metric measurement to the nearest 0.5 of a metre, square metre or hectare unless more accuracy is felt desirable.
- c. Have the amended by-law adopted by Council.
- d. Deposit a copy of the amended by-law with the Ministry of Housing or with the appropriate delegated authority within 30 days of passing of the by-law.

If these steps are followed no approval by the Ontario Municipal Board will be required for the amended by-law.

If the conversion of numbers is not done according to the procedures that are to be set out in the regulations or if other changes are made in the by-law then the normal approval procedures will have to be followed as set out in *The Planning Act*.

Because *The Planning Act* has yet to be amended and new regulations set forth, the conversion of zoning by-laws to the new metric system should not be made until they are completed. Preparatory work for this task, however, should be started as soon as possible.

F.1.1d Accuracy in the Conversion of Existing By-laws

In the regulations which will put forth the steps to follow in converting a zoning by-law, a metric measurement does not have to be accurate to more than 0.5 of the appropriate unit. It may be that some municipalities require more accuracy in some instances. Greater accuracy would be acceptable. Approval by the Ontario Municipal Board still would not be required if greater accuracy were decided upon by the municipal council.

In summary there are three options in rounding for conversion:

1. round to the nearest 0.5 of a metre, square metre or hectare (no OMB approval required)
2. be more accurate in rounding (no OMB approval required)
3. choose some other system of rounding which is less accurate than to 0.5 of the appropriate unit because it appears more suitable (requires OMB approval).

F.1.2 Official Plans

The conversion of official plans should be done as soon as possible, and not later than January 1, 1979. In cases where this would be impossible to achieve, officials should confer with the Ministry of Housing for a more

appropriate date.

The same procedures for converting measurement terms in existing official plans will be used as will be specified for existing zoning by-laws by regulation and in the amendments which will be made to *The Planning Act*.

An amended official plan prepared for conversion purposes will be approved forthwith after being received in proper form. Usual approval procedures used for amendments to official plans will be followed but no circulation of the document by the Ministry of Housing to any agency will be necessary.

There is no requirement on the part of the municipality to hold public meetings prior to the submission to the Minister.

F.1.3 Other Existing Municipal Planning Documents

Existing planning documents produced at the local level but with which there is no direct provincial involvement -- for example, property standards by-laws -- should be converted to facilitate the use of one measurement system within all planning documents.

Registered land transactions, e.g. consents and plans of subdivision, do not need to be converted.

F.2 NEW MUNICIPAL PLANNING DOCUMENTS

All new by-laws and official plans, including amendments, and new subdivisions should be in metric units.

Naturally the adoption of a new by-law or official plan will involve the usual approval as set out in *The Planning Act*.

It should be noted again that as of July 1, 1976 land registration can be effected in metric units.

F.2.1 Plans of Subdivision

The first of January 1978 is the target date for the commencement of predominant use of metric units in the construction industry. It would be advantageous to have the same system of measurement in the construction industry and in related documents. Therefore, plans of subdivision are to be in metric terms after 1 July 1978.

This date would apply to documents which had not proceeded to a point where conversion would be impractical. This would include projects being done in stages. Consultation should be undertaken as soon as possible with the Ministry of Housing to arrange a more appropriate date in cases where this deadline will cause major problems.

F.2.2 Other Land Transactions

Land transactions which require a new survey or metes and bounds description such as consents should be in metric terms not later than 1 July 1978.

F.2.3 By-laws

Any municipal by-laws submitted for approval under *The Planning Act* should contain metric terms after 1 July 1978. In cases where this target date would prove impossible consultation with the Ministry of Housing should be undertaken.

F.2.4 Official Plans

New official plans should be submitted for approval in metric terms after 1 July 1978. Consultation with the Ministry of Housing should be undertaken where this date would be impossible to meet.

F.2.5. Other Planning Documents

All other new planning documents should be written in metric terms after 1 July 1978.

G. ASSISTANCE IN CONVERTING PLANNING DOCUMENTS

Any municipality wishing more specific advice or extension of any date for conversion in their metric conversion program may contact the Community Planning Advisory Branch at the following offices:

Central Region
2nd Floor
47 Sheppard Avenue East
Toronto.
M2N 2Z8 (416/226-1855)

South East Region
3rd Floor
244 Rideau Street
Ottawa.
K1N 5Y3 (613/233-9301)

North East Region
758 La Salle Blvd. West
Sudbury.
P3A 4V4 (705/560-0120)

South West Region
7th Floor
495 Richmond Street
London.
M6A 5A9 (519/673-1611)

North West Region
435 James Street South
Thunder Bay.
P7C 5G6 (807/475-1651)

SELECTED BIBLIOGRAPHY

Canadian Standards Association.

Canadian Metric Practice Guide.

CAN3-Z234.1-76, Rexdale.

Available: Canadian Standards Association, 178 Rexdale
Boulevard, Rexdale, Ontario M9W 1R3.
(\$5.50)

Metric Commission Canada.

Sector 5.5 Surveying, Town Planning, Real Estate.

November 1976, Ottawa.

Available: Metric Commission Canada, 301 Elgin Street,
Ottawa, Ontario K1A 0H5.
(Free)

Metric Commission Canada.

*Section 5.1 Construction, Summary of Metric
Conversion Plan.*

July 1976, Ottawa.

Available: Metric Commission Canada, 301 Elgin Street,
Ottawa, Ontario K1A 0H5.
(Free)

Ministry of Consumer and Commercial Relations.

*A Metric Information Kit for Use in
The Land Registration Systems.*

June 1976, Toronto.

Available: Land Boundaries Program,
Ministry of Consumer and Commercial Relations,
Queen's Park, Toronto, Ontario.
(Free - enclose large brown envelope, self-
addressed and stamped with 43¢ postage)

Ontario Interministerial Committee of National
Standards and Specifications.

Metric Practice Guide.

1975, Toronto.


Available: Ontario Government Bookstore
880 Bay Street, Toronto, Ontario.
(\$1.00)

APPENDIX I

EXAMPLES OF THE CONVERSION OF EXISTING ZONING BY-LAWS

The following examples illustrate the proper method of converting existing zoning by-laws into metric measurements after *The Planning Act* is amended. The same principles may be used in converting an official plan or, for that matter, any other planning document with the exception of a plan of subdivision.

Example 1 - a typical side yard setback

<u>non-metric measurement</u>		<u>conversion factor</u>		<u>metric measurement</u>
4.000 feet	x	0.304 8	=	1.219 m
				

Multiplication of the non-metric measurement by the conversion factor is the first step. Next, the answer is shown with only the proper significant figures. In this example, 1.219 m would be correct.

The answer should not contain more than 4 significant digits or figures because the conversion factor has only 4 significant figures. In the existing by-law the 4-foot setback is meant to be exact, or accurate to a number of decimal places, and, during conversion, is written to correspond to the same degree of accuracy as the conversion factor.

Under the conversion procedure which will be in an amendment to *The Planning Act* the new metric measurement can be rounded to the nearest 0.5 m, or in this case, 1.0 m.

The rounded metric answer 1.0 m is 0.219 m, (8 5/8"),

less than the original converted measurement of 1.219 m.

In instances where greater accuracy is required, the metric measurement can be rounded to 1.2 m. Rounding to one decimal place in this instance produces variance under the original measurement of 0.019 m, about 3/4" or the diameter of a nickel.

Where even greater accuracy is felt appropriate, 1.22 m would be correct. This is slightly greater than the original measurement - (only 1/16").

Example 2 - a typical minimum frontyard setback

<u>non-metric measurement</u>		<u>conversion factor</u>		<u>metric measurement</u>
25.00 feet	x	0.304 8	=	7.620 m

Under the provisions of *The Planning Act* (amended) the front-yard setback would be expressed as 7.5 m after conversion.

The converted amount, 7.5 m, differs from the original measurement by 0.12 m or 0.39 feet (about 4 3/4").

Example 3 - a typical street right-of-way

<u>non-metric measurement</u>		<u>conversion factor</u>		<u>metric measurement</u>
66.00 feet	x	0.304 8	=	20.12 m

When the non-metric measurement is converted to metric terms under provisions in the amended *Act* the width of the right-of-way would be 20 m.

Example 4 - a typical urban residential lot

<u>non-metric measurement</u>		<u>conversion factor</u>		<u>metric measurement</u>
5 000.000 square feet	x	0.092 903 04	=	464.515 m ²

After conversion the area of the lot would be referred to as 464.5 m².

Example 5 - Estate Residential Lot

<u>non-metric measurement</u>	<u>conversion factor</u>	<u>metric measurement</u>
10.000 00 acres	x 0.404 685 6	= 4.046 856 ha

Rounded, the acceptable metric measurement would be 4 ha.

The variance in conversion is 0.046 856 ha, 0.115 78 acres or 5 043.4 sq. ft. This is an area about 71 feet by 71 feet square. The difference is 1%.

METRIC MEASUREMENTS TO REPLACE SOME COMMONLY USED NON-METRIC
MEASUREMENTS IN EXISTING RESTRICTED AREA (ZONING) BY-LAWS

	<u>non-metric</u>	<u>metric</u>
frontage	40 feet	12.0 metres
	50	15.0
	60	18.5
	100	30.5
setback	4 feet	1.0 metres
	6	2.0
	8	2.5
	25	7.5
	30	9.0
area	4 000 square feet	371.5 square metres
	5 000	464.5
	7 500	697.0
	15 000	1 393.5
	1 acre	4 047.0 square metres or 0.5 hectares
density	30 units per acre	74.0 units per hectare
	100	247.0
	120	296.5
	150	370.5
parking	8 feet x 20 feet	2.5 metres x 6.0 metres
	10 x 20	3.0 x 6.0

APPENDIX II
EXAMPLES OF THE USE OF METRIC MEASUREMENTS
IN NEW PLANNING DOCUMENTS

There is the opportunity when writing new planning documents to establish general guidelines and standards which are easy to administer as well as having a meaningful basis.

In most cases full units of measure such as metres or square metres will provide sufficient accuracy for planning purposes.

Example 1 - a typical side yard setback

A small sideyard measurement comparable to the commonly-used non-metric 4 to 6-foot setback, could be expressed to 1 or 2 metres. However, using the smaller amount as a standard may not permit enough access between buildings or separation for visual purposes. Conversely 2 metres may provide more separation than is necessary and be wasteful of land in areas where land costs are high. In such instances it may be more desirable to establish a setback standard of 1.5 metres. This is still easy to apply and rational in intent.

Example 2 - typical urban lot street frontage

Common residential street frontages in many urban areas of Ontario are 40, 50, 60 and 100 feet. Using the metric equivalents for these non-metric frontages would produce odd amounts even when rounded to 1 decimal place - 12.2, 15.2, 18.3 and 30.5 metres respectively. Whole metric measurements of 12, 15, 18 and 30 metres will be much easier to use and make no significant change in present dimensions.

Example 3 - an urban residential lot

A common lot which is now measured as 40' x 80' or 3 200 square feet could be expressed in metric terms as 300 m².

A rough density figure will not be influenced since there is only a small difference between the old and new standards.



